

## CLAIMS:

1. A jigsaw puzzle including a plurality of rigid planar pieces, a plurality of interlocking cooperative pairs of coupling elements being formed in said pieces to interlock edge to edge each adjacent piece to another adjacent piece characterised by at least some of the pieces being transition pieces which include hinges and define transitions between two intersecting surfaces in the completed puzzle.
2. A jigsaw puzzle as claimed in claim 1 wherein each transition piece includes a single hinge line.
3. A jigsaw puzzle as claimed in any preceding claim wherein the planar pieces comprise paperboard or cardboard having a thickness in excess of 1mm.
4. A jigsaw puzzle as claimed in claim 3 wherein the thickness of the puzzle is from 1mm to 2mm.
5. A jigsaw puzzle as claimed in any preceding claim wherein the hinges are defined by score lines cut into one side of the transition piece only such that the piece may be bent in one direction only.
6. A jigsaw puzzle as claimed in any preceding claim which when assembled defines a hollow cube.
7. A jig-saw puzzle which when completed, forms a 3-dimensional object defining at least two intersecting surfaces, the puzzle being formed from a plurality of such interlocking generally planar pieces, at least some of which are transition pieces being hinged such that one part of the piece is co-planar with one of the intersecting surfaces and an other part of the piece co-planar with a second different intersecting surface.
8. A jig-saw puzzle as claimed in claim 7 wherein the transition pieces define fold lines scored into one side of the pieces so that the piece may be bent in one direction only.
9. A jig-saw puzzle as claimed in claim 7 or claim 8 wherein the angle defined between the two intersecting surfaces of the transition piece in the 3-dimensional object is substantially less than  $180^\circ$ .
10. A jig-saw puzzle as claimed in any one of claims 7 to 10 wherein the angle defined between the two intersecting surfaces is  $90^\circ$ .
11. A jig-saw puzzle as claimed in any preceding claim further including a hinged structural piece defining two relatively rotatable planar portions, one first portion in use defining part of an external surface or shell of the puzzle, the other second portion extending inside the external shell of the puzzle.
12. A jig-saw puzzle as claimed in claim 11 wherein the second portion of the structural piece defines a slot for inter-engagement with parts of the structural pieces.

13. A generally planar jig-saw puzzle piece comprising two generally planar portions joined by a hinge line, each portion defining male or female coupling means for interlocking with corresponding coupling means on adjacent pieces.
14. A method of making a jigsaw puzzle of a 3-dimensional object comprising the steps of:-
- a) mapping the surfaces of the object to two dimensions
  - b) defining a series of transition pieces crossing edges of the object where the surfaces of the object intersect and redistributing areas of the surfaces to take account of the transition pieces;
  - 10 c) separating the pieces in the two dimensional map;
  - d) forming hinge lines in the transition pieces; and
  - e) cutting out the pieces.
15. The method of claim 14 wherein the pieces are slightly enlarged prior to cutting.
16. The method of claim 14 or 15 wherein the pieces are cut out using a laser cutter.
- 15 17. The method of claim 15 or 16 wherein the pieces are cut out using a knife blade.
18. A jigsaw puzzle including:
- a plurality of rigid planar pieces, a plurality of interlocking cooperative pairs of coupling elements being formed in said pieces to interlock edge to edge each adjacent piece to another adjacent piece to form a self supporting surface; wherein
  - 20 the pieces when assembled form a hollow three dimensional object defining intersecting surfaces characterised by;
  - a plurality of transition pieces, each transition piece comprising two generally planar portions joined by a hinge line, each portion defining coupling elements for interlocking with corresponding coupling means on adjacent pieces; wherein
  - 25 the hinge lines of the transition pieces defining intersecting surfaces of the hollow three dimensional object.